

US008486142B2

(12) United States Patent

Bumbalough et al.

(10) Patent No.:

US 8,486,142 B2

(45) **Date of Patent:**

Jul. 16, 2013

(54) ACCOMMODATING INTRAOCULAR LENSES

(75) Inventors: **Timothy R. Bumbalough**, Fullerton, CA (US); **Rakhi Jain**, Irvine, CA (US);

Scott J. Catlin, Orange, CA (US); Tamara J. Yorita, Irvine, CA (US)

(73) Assignee: Abbott Medical Optics Inc., Santa Ana,

CA (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 440 days.

(21) Appl. No.: 12/822,942

(22) Filed: Jun. 24, 2010

(65) Prior Publication Data

US 2011/0257742 A1 Oct. 20, 2011

Related U.S. Application Data

(60) Provisional application No. 61/220,887, filed on Jun. 26, 2009.

(51) Int. Cl. A61F 2/16

(2006.01)

(52) **U.S. Cl.**

USPC 623/6.46

(58) Field of Classification Search

USPC 623/6.11, 6.22, 6.37, 6.39, 6.4, 6.43, 623/6.46, 6.49

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

4,361,913 A	12/1982	Streck
4,370,760 A	2/1983	Kelman
4,373,218 A	2/1983	Schacha

4,442,553	A	4/1984	Hessburg	
4,512,040	A	4/1985	McClure	
4,560,383	A	12/1985	Leiske	
4,562,600	A	1/1986	Ginsberg et al.	
4,615,701	A	10/1986	Woods	
4,641,934	A	2/1987	Freeman	
4,731,078	A	3/1988	Stoy et al.	
4,769,035	A	9/1988	Kelman	
4,813,955	A	3/1989	Achatz et al.	
4,822,360	A	4/1989	Deacon	
4,842,601	A	6/1989	Smith	
4,888,012	A	12/1989	Horn et al.	
4,892,543	A	1/1990	Turley	
4,932,966	A	6/1990	Christie et al.	
		(Continued)		

FOREIGN PATENT DOCUMENTS

CH 681687 A5 5/1993 DE 19951148 A1 4/2001

(Continued)

OTHER PUBLICATIONS

International Search Report for Application No. PCT/US2010/039860, mailed on Dec. 14, 2010, 4 pages.

(Continued)

Primary Examiner — William H. Matthews (74) Attorney, Agent, or Firm — Abbott Medical Optics Inc.

(57) ABSTRACT

An intraocular lens is disclosed, with an optic that changes shape in response to a deforming force exerted by the zonules of the eye. A haptic supports the optic around its equator and couples the optic to the capsular bag of the eye. Certain haptic features improve the accommodative performance of the haptic, such that compressive/tensile forces may be more efficiently transferred from the haptic to optic. Furthermore, certain aspects also provide enhanced bag-sizing capability so that the IOL better fits within the capsular bag.

5 Claims, 7 Drawing Sheets

